

What Is Claimed Is:

1. An optical sensor comprising:

 a transmitter that emits light rays;

 transmitting optics installed downstream of the transmitter;

 an adjustment device operatively arranged for reversibly adjusting, in three spatial directions, the relative position of the transmitter and the transmitting optics;

 a receiver that receives light rays; and

 an evaluation unit for evaluating the received signals that are present at the receiver output.

2. The optical sensor according to claim 1, wherein the optical sensor is a barcode reader, and further comprising a deflection unit, wherein the transmitting light rays are periodically guided with the deflection unit across a monitoring range for detecting barcodes.

3. The optical sensor according to claim 1, wherein the adjustment device comprises an optics holder in which the transmitting optics are positioned to pivot in a plane

that is oriented perpendiculaly to the optical axis of the transmitter.

4. The optical sensor according to claim 3, wherein the adjustment device is provided with an operating element in the form of a lever for adjusting the position of the transmitting optics.

5. The optical sensor according to claim 3, wherein the adjustment device comprises fixing screws for fixing an adjustment position of the transmitting optics.

6. The optical sensor according to claim 3, wherein the optics holder comprises a spherical head, in which the transmitting optics are disposed, and is enclosed by two spherical half shells that form a receptacle in which the spherical head with the transmitting optics is positioned so as to pivot.

7. The optical sensor according to claim 6, wherein the spherical half shells are pressed against the spherical head with the fixing screws for fixing the position of the

transmitting optics.

8. The optical sensor according to claim 6, wherein one spherical half shell is provided with an opening, and the sensor further comprises a lever connected to the spherical head and extending through the opening, wherein the lever functions as an operating element.

9. The optical sensor according to claim 6, wherein the transmitter is arranged to be displaced in the direction of an optical axis of the transmitter.

10. The optical sensor according to claim 3, further comprising a first stationary holding part adjacent to the optics holder, and wherein the optics holder comprises a support element for accommodating the transmitting optics, and two holder segments that adjoin the support element on the longitudinal sides, wherein at least one holder segment of the two holder segments is disposed on the stationary holding part, in a manner that the position of the at least one holder segment is adjustable.

11. The optical sensor according to claim 10, further comprising a second stationary holding part, and wherein one of the two holder segments is disposed on the first stationary holding part so that the one holder segment is displaceable in a plane oriented perpendicularly to an optical axis of the transmitter, and the second holder segment of the two holder segments is disposed on the second stationary holding part, in a manner that the second holder segment rotates and is displaceable.

12. The optical sensor according to claim 11, wherein the one holder segment has a plate-shaped design and rests with its front on a flat contact surface of the first stationary holding part.

13. The optical sensor according to claim 12, wherein the first stationary holding part has a support surface and a recess that exits at the support surface, a bore extending through the one holder segment, and a lever that functions as an operating element extends through the bore of the one holder segment and engages in the recess in the stationary holding part for adjusting the position of the

transmitting optics.

14. The optical sensor according to claim 13, wherein the bore has a cross section that increases continuously starting from the center of the one holder segment toward the exit openings at the bore's front and back.

15. The optical sensor according to claim 13, wherein the recess in the first stationary holding part is essentially hemispherical, and wherein the free end of the lever is arranged to pivot in the recess.

16. The optical sensor according to claim 11, further comprising a rotary head provided at a free end of the second holder segment, where the second holder segment is positioned on the second stationary holding part, in a manner that the second holder segment rotates and is displaceable.

17. The optical sensor according to claim 16, wherein the second stationary holding part is provided with an indentation that ends on a holding surface, in which the

rotary head is positioned.

18. The optical sensor according to claim 17, wherein the indentation has a constant semi-circular cross section in a longitudinal axis direction, wherein its radius is adapted to the radius of the rotary head.

19. The optical sensor according to claim 18, wherein the longitudinal axis of the indentation extends essentially parallel to a longitudinal axis of the optics holder.

20. The optical sensor according to claim 11, further comprising a flexible element connecting a support element to the one holder segment, wherein the position of the transmitting optics in the direction of the optical axis of transmitter is adjusted by deflection of the support element relative to the one holder segment.

21. The optical sensor according to claim 20, wherein the optics holder is a molded plastic part, and wherein the flexible element is formed by a locally weakened section in

the molded plastic part.

22. The optical sensor according to claim 20, wherein the deflection of the support element can be preset with an eccentric element.

23. The optical sensor according to claim 22, wherein the eccentric element is an eccentric plate that is actuated from the top, the outer surface of which rests against the back of the optics holder.

24. The optical sensor according to claim 23, wherein the rotary head on the second holder segment is pressed into the indentation in the second stationary holding part by the pressure exerted with the eccentric plate onto the optics holder.

25. The optical sensor according to claim 10, wherein the transmitter is positioned inside an insert, which is joined on the front by the optics holder.

26. The optical sensor according to claim 25, wherein

the at least one holder segment is adjustably arranged between the insert and the first stationary holding part and is fixeable at this location in a preset adjustment position with the aid of a fixing screw.